

Title of Intervention: Lifestyle intervention in overweight individuals with a family history of diabetes

Intervention Strategies: Group Education, Individual Education

Purpose of the Intervention: To use diet and exercise to reduce coronary heart disease (CHD) risk factors and incidence of diabetes in overweight individuals with a parental history of diabetes

Population: Overweight individuals who were currently not diabetic but had a parental history of diabetes

Setting: Community-based

Partners: None mentioned

Intervention Description: Participants were divided into three intervention groups: 1) diet, 2) exercise and 3) diet plus exercise.

- Group education: Group meetings for the diet and diet plus exercise groups were conducted by a multi-disciplinary team of therapists (behavior therapist and registered dietitian). Sessions focused on nutrition information related to the low-calorie and low-fat regimen as well as behavioral strategies to help modify dietary intake. Sample meal plans and shopping guides were distributed to participants. For those receiving the exercise or diet plus exercise intervention, weekly sessions were conducted by the same staff and exercise physiologist. Walks with the therapist were held at each of these meetings.
- Individual Education: Participants received individualized diets, exercise and physical activity goals.

Theory: Social Cognitive Theory

Resources Required:

- Staff/Volunteers: Behavior therapist, registered dietitian, exercise physiologist
- Training: Not mentioned
- Technology: Not mentioned
- Space: Class sessions, walking sessions
- Budget: Not mentioned
- Intervention: Newspaper advertisements, materials for oral glucose tolerance tests, meal plans, shopping guides
- Evaluation: Questionnaires, tools for biological assessment

Evaluation:

- Design: Cohort
- Methods and Measures:
 - Participants self-monitored daily calorie and fat intake, which was then reviewed weekly by the nutritionist.
 - Questionnaires assessed physical activity levels and dietary intake.
 - Blood samples were collected for biological assessment.

Outcomes:

- Short Term Impact: Not measured
- Long Term Impact: Food: The diet and diet plus exercise groups had significant decreases in their daily caloric intake and percentage of calories from fat. The exercise and diet plus exercise groups had significant increases in self-reported physical activity and reductions in time required to walk a half-mile. The diet and diet plus exercise conditions experienced more weight loss than other groups and had significant changes for fasting glucose, insulin, total cholesterol, HDL and LDL cholesterol, triglycerides and blood pressure after six months. Neither behavior changes nor physiological changes were well maintained two years later.

Maintenance: Two, six-week refresher courses were conducted.

Lessons Learned: Not mentioned

Citation(s):

Wing RR, Venditti E, Jakicic JM, Polley BA, Lang W. Lifestyle intervention in overweight individuals with a family history of diabetes. *Diabetes Care*. Mar 1998;21(3):350-359.